

# Ewing Mountain Vegetation Project

## Draft Environmental Assessment Comments and Concerns

This document contains the George Washington and Jefferson NF (GWJNF) Mount Rogers National Recreational Area (Mt. Rogers NRA) responses to substantive comments that were received during the comment period for the [Ewing Mountain Vegetation Project Draft Environmental Assessment](#) (EA).

An email and hardcopy [letters](#) were sent out and a [legal notice](#) was published in the *Bristol Herald Courier* on Wednesday, April 28<sup>th</sup>, 2021 to notify interested parties of the availability of the Ewing Mountain Vegetation Project draft EA. This initiated the comment period, which ended on Friday, May 28<sup>th</sup>, 2021.

The Forest Service received [correspondence](#) from ten individuals, organizations, and agencies. These comments have been analyzed and responded to using a process called content analysis. All notable comments were assigned a unique contact number generated from the correspondence number and the comment number (e.g. #38-2 would be the second comment identified from letter number 38). Commenters and their associated organizations are shown in Table 1, below.

Similar comments were grouped together, and for each group a concern statement was developed. Concern statements are meant to capture the thought, idea, or issue common to all of the associated comments. They often represent the view of many respondents but may also be derived from just one person's input. Concern statements provide the framework for preparing responses to public comment.

Comments may:

- Identify issues (cause and effect relationship between proposed action and effects);
- Suggest alternative ways to conduct the action, or lessen the impacts of the action through mitigation or project design feature;
- Suggest a method to measure effects; and/or,
- Provide new information for the interdisciplinary team to consider.

Not all comments are relevant to the decision; comments are not relevant (non-substantive) if they are:

- Beyond the scope of the proposal;
- Unrelated to the decision being made;
- Already decided by law, regulation or policy;
- Conjectural in nature or not supported by scientific evidence; or,
- General in nature (not specific to this project) or position statements not supported by reasons.

**Table 1. Respondents to Ewing Mountain Vegetation Project Draft Environmental Assessment**

<b>Letter #</b>	<b>Author Name</b>	<b>Organization Name</b>	<b>Date Submitted</b>
1	Rutherford, David		5/18/2021
2	Stephenson, Sandi	Mount Rogers Trail Coalition	5/20/2021
3	Lowe, Cathy		5/24/2021
4	Mueller, Linda		5/26/2021
5	Matthews, Glenn		5/27/2021
6	Stilwell, Curtis & Renee		5/28/2021
7	Sluys, Nancy	Back Country Horsemen of the Virginia Highlands	5/28/2021
8	Hypes, René	Department of Conservation and Recreation- Division of Natural Heritage	5/28/2021
9	Biemiller, Nick	Ruffed Grouse Society and American Woodcock Society	5/28/2021
10	Davis, Kristin and Gall, Spencer	Southern Environmental Law Center	5/28/2021

## General

**These comments were determined to be non-substantive.**

#1-1 I am all for it. This is a positive change in USFS policy towards habitat management. This will be a great benefit for birders, hunters and all outdoor enthusiasts.

**Response:** Thank you for your comments and your support for the Ewing Mountain Vegetation Project. We appreciate your interest and participation in the planning process.

#8-11 There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

**Response:** This comment provides information concerning resources that have not been documented within the project area.

#2-2 One of your goals is to do away with user created trails and the solution is to add some contacter trails to the system.

**Response:** This comment addresses an issue that is beyond the scope of the proposal.

#3-1 ... the national forest was left to the public for recreation not the grouse[...]You need to stay out of recreational areas.

#9-3 The low objectives for ESH Forest-wide emphasizes the need to achieve higher levels of ESH creation on the project-level, especially within the 8E1 Management Prescription.

#10-27 The Draft EA pays lip service to cumulative impacts without producing useful analysis

#10-35 ... we believe that the adverse impacts from NNIS species may outweigh the benefits of the Project, at least in some areas

**Response:** The comments above are general or conjectural in nature, or are position statements not supported by reasons.

## Aquatics

**The Forest Service should address the potential impacts to the candy darter and its proposed critical habitat and consider additional design criteria to protect this endangered species to support a finding of no significant impact (FONSI).**

- #10-11 The draft EA does not adequately address the potential impacts to the candy darter and its critical habitat[...]. Much of the logging proposed in the draft EA would occur above tributaries to Cripple Creek, which is designated as critical habitat for the endangered candy darter.[...] Despite the clear potential for impacts, the draft EA and accompanying reports do not provide meaningful analysis of how the project is likely to impact the candy darter and its critical habitat.
- #10-12 Sedimentation from timber harvest and associated ground disturbance in the Cripple Creek watershed is a significant threat to the candy darter[...]. Temperature increases from warmwater runoff due to diminished forest cover is also a concern.[...] the Species Status Assessment Report for the candy darter states that the presence of coliform bacteria may be an indicator of "generally degraded conditions that make the habitat marginal for the species."
- #10-13 The Fisheries and Aquatic Habitat Specialist Report for the project identifies five tributaries to Cripple Creek as the geographic scope of the cumulative effects analysis within the project area[...]. Why is Cripple Creek itself not included in the geographic scope of the cumulative impacts analysis?[...] It appears the Forest Service has not performed (much less disclosed) an analysis of impacts to the main stem of Cripple Creek itself from the proposed action.[...] the agency has not provided any data to substantiate the assertion that impacts to the main stem of Cripple Creek will be "insignificant and immeasurable."
- #10-14 ... all of Cripple Creek downstream from the project area is listed as impaired for e. coli. The Soil and Water Resources Report acknowledges this status, but the Fisheries and Aquatic Habitat Specialist Report does not mention it, address how candy darter may be affected, or analyze whether project activities may exacerbate existing conditions.
- #10-15 ... the Fisheries and Aquatic Habitat Specialist Report discusses impacts to Cove Branch and Cold Run, but does not address the other three Cripple Creek tributaries: Francis Mill Creek, Rock Creek, and the Unnamed Tributary East of Cove Branch.
- #10-16 ... the Fisheries and Aquatic Habitat Specialist Report's discussions of Cove Branch and Cold Run do not satisfy the agency's hard look obligation.[...] the report discloses the results of sediment modeling that the agency deemed unacceptable, which prompted changes to the proposed action in those watersheds. But the report does not disclose any sediment modeling results based on those changes.
- #10-17 ... the cumulative effects boundary excludes several actions in other nearby watersheds that may have a cumulative impact on the candy darter, including the Eastern Divide Phase II project on the Eastern Divide Ranger District and the Gauley Healthy Forests Restoration Project on the Monongahela National Forest.

- #10-18 ... the Forest Service cannot count on best management practices (BMPs) to protect the candy darter. When USFWS listed the candy darter as endangered, it found that BMPs did not ameliorate the risk of extinction[...]The USFWS Candy Darter Recovery Outline specifically recognizes that ordinary BMPs are not sufficient
- #10-19 The draft EA asserts that the project is not likely to adversely affect the candy darter and not likely to adversely modify its critical habitat[...]because it "will be in compliance with the [...]Threatened and Endangered Mussel and Fish Conservation Plan [...]The Conservation Plan is a good start, but it is not enough on its own.[...]the Conservation Plan was published in 2004—14 years before the candy darter was listed as endangered—and necessarily does not account for the candy darter specifically. Likewise, the Conservation Plan does not consider whether specific conservation measures are necessary for threatened and endangered fish species in the New River drainage; when the Conservation Plan was published, it accounted only for fish species in the upper Tennessee, Cumberland, and Roanoke drainages. The requisite conservation measures may be similar or identical for fish species in the New River drainage, but the Forest Service cannot reach that conclusion without analysis.[...]The draft EA cannot tier to the Conservation Plan without additional analysis about the potential impacts of water temperature increases from the project.[...]Has the Forest Service analyzed the impact on water temperature in the project area from warmwater runoff?
- #10-20 The requirements of the Conservation Plan apply to 6th level watersheds. There are two 6th level watersheds that the Forest Service must account for.[...]The Forest Service acknowledges that the project will introduce increased sedimentation to streams in these 6th level watersheds. The Forest Service must explain how this projected sedimentation will "maintain or restore [the] balance of water and sediment" and "stabilize or improve" the condition of Francis Mill Creek, Rock Creek, Cold Run, Cove Branch, and the Unnamed Tributary east of Cove Branch. [...]the Forest Service must explain how the Conservation Plan's objectives will be satisfied with respect to sedimentation in the main stem of Cripple Creek.

**Response:** A Biological Assessment (BA) (USDA Forest Service, 2021a) and a Biological Evaluation (BE) (USDA Forest Service, 2021b) were completed to document the analysis of potential effects of the proposed project to Threatened, Endangered, and Regionally Sensitive (TES) Species and associated habitat. The US Fish and Wildlife Service (USFWS) concurred on May 27, 2021 with a determination of “Not likely to adversely effect” for the Federally Endangered candy darter (*Etheostoma osburni*), and “Not likely to adversely modify” for candy darter critical habitat. The Environmental Assessment (EA) and accompanying reports note project modifications that were made to ensure consistency with *George Washington and Jefferson National Forests Federally Listed Threatened and Endangered Mussel and Fish Conservation Plan* (Conservation Plan) (USDA Forest Service, 2004a) and 2004 [Revised Land and Resource Management Plan Jefferson National Forest](#) (Forest Plan) (USDA Forest Service, 2004b) standards.

Table 2 below associates the candy darter stressors and threats with the corresponding Conservation Plan and Forest Plan standards that were developed to maintain the physical, chemical and biological components of aquatic ecological integrity.

**Table 2. Candy darter Conservation Plan and Forest Plan standards**

<b>Potential stressor of candy darter from Final Rule 11/21/2018</b>	<b>Threats to candy darter from Draft Recovery Outline</b>	<b>Conservation Plan Standards and Jefferson Plan Standards</b>
Water Temperature	Increases in Water Temperatures	11-010, 11-011, 11-012, 11-016, 11-017, 11-019, 11-022, 11-034, 11-035, 11-036, 11-038, 11-039, 11-041, 11-042, 11-045, FW-14, FW-18, FW-27
Excessive Sedimentation	Sedimentation	11-001, 11-002, 11-003, 11-009, 11-011, 11-012, 11-021, 11-022, 11-023, 11-027, 11-028, 11-029, 11-030, 11-031, 11-032, 11-033, 11-034, 11-035, 11-036, 11-038, 11-039, 11-040, 11-041, 11-042, 11-043, 11-044, 11-045, 11-046, 11-047, 11-048, 11-049, 11-050, 11-051, 11-052, 11-053 11-054, 11-056, FW-12, FW-13, FW-16, FW-20, FW-21, FW-22, FW-23, FW-24, FW-25, FW-26, FW-27, FW-29, FW-30, FW-31
Habitat Fragmentation		11-049, 11-049, 11-050, 11-051, 11-052, 11-053 11-054, 11-055, FW-19
Water Chemistry	Spills and Discharges	11-007, 11-026, 11-033, 11-034, 11-035, 11-036, 11-040, 11-045, FW-28
Water Flow		11-008, 11-013, 11-049, 11-049, 11-050, 11-051, 11-052, 11-053 11-054, 11-055, FW-12, WF-19
Non-native Species Competition (specifically, hybridization with variegate darter*PRIMARY STRESSOR)	Variegate darter, and Other Non-native Species	11-006, 11-014, 11-054, 11-055
	Other Physical and Biological Perturbations	11-004, 11-005, 11-010, 11-011, 11-012, 11-013, 11-015, 11-016, 11-017, 11-018, 11-019, 11-020, 11-024, 11-025, 11-038, 11-039, 11-043, 11-044, FW-14, FW-15, FW-17, FW-18, FW-23, FW-27

As per the Conservation Plan, a Conservation Zone will be established and managed within the project watersheds that drain to Cripple Creek, which has been identified as designated critical habitat for candy darter. The Conservation Zone includes the riparian corridor and the channeled ephemeral zone and serves as a

- 1) filter strip to impede surface runoff, trap sediment, and filter and adsorb pollutants,
- 2) vehicle exclusion zone to prevent major ground disturbance adjacent to stream channels, and
- 3) shade strip to help maintain ambient stream water temperatures, moist habitats, and sources for large woody debris.

Minimum widths from the Conservation Plan are shown in Table 3, as seen below.

**Table 3. Minimum Conservation Zone Widths for Federally Listed Mussel and Fish Species (In Feet, Measured as Described Above) on Each Side of Stream**

	Slope Class		
	0-10% Core Area	11-45% Core Area Plus Extended Area	45%+ Core Area Plus Extended Area
Perennial	100	125	150
Intermittent	50	75	100
Channeled ephemeral	25	25	25

The candy darter habitat stressors listed in the Final Rule and shown in Table 2 are water temperature, excessive sedimentation, habitat fragmentation, water chemistry, and water flow. *Escherichia coli* (E. coli) is not included in this list and there are no additional habitat stressors specific to the candy darter that were not addressed in the Conservation Plan. Additional discussion with the USFWS (personal communication 3/18/2020) confirmed that as stated in the Final Rule effective December 21, 2018, as published in the Federal Register vol. 83, No. 225, on 11/21/2018, the primary stressor for the candy darter is hybridization with the variegated darter (*Etheostoma variatum*). Nothing that is proposed by this project is increasing the chance of variegated darter introduction to the watershed. All other threats and habitat stressors associated with Forest Service habitat management are similar to those already addressed in the Conservation Plan for other species in other watersheds, and no additional measures are needed.

The project area lies within three major drainage basins: Elk Creek-New River (71,622 acres), Crooked Creek-New River (78,541 acres), and Cripple Creek (88,817 acres) in Carroll, Grayson, and Wythe Counties, Virginia. Project effects analysis for aquatic species and habitats is performed in the context of smaller watersheds containing considerable Forest Service-managed lands, and eight smaller watersheds ranging from approximately 800 to 13,000 acres were defined for the analysis. These watersheds were chosen because they contain considerable Forest Service lands and the proposed activities, and it is anticipated that project effects to fisheries and aquatics in the larger watersheds below these points would be immeasurable. These smaller watersheds are subsets of the larger 6<sup>th</sup> level watersheds considered in the Conservation Plan.

Cove Branch and Cold Run were highlighted in the draft *Ewing Mountain Soil and Water Resources Report* (USDA Forest Service, 2021c) as needing additional design criteria, and thus were discussed in the *Ewing Mountain Fisheries and Aquatic Habitat Specialist Report* (USDA Forest Service, 2021d). The other three tributaries of Cripple Creek (Francis Mill Creek, Rock Creek, and the Unnamed Tributary East of Cove Branch) were not addressed because they had no estimated increase of modeled sediment from project activities. The sediment modeling identified potential problem areas which prompted changes to the proposed action that eliminated or mitigated the potential problems. For example, a proposed road within the

riparian corridor that crossed a stream several times was dropped from the project proposal and alternative access was identified; no additional sediment modeling was necessary.

As stated in the Soil and Water report, the proposed action will not increase bacterial concentrations, and harvest units are upstream from agricultural practices on private lands where bacterial impacts are likely occurring. Candy darter habitats within the Eastern Divide Phase II project on the Eastern Divide Ranger District and the Gauley Healthy Forests Restoration Project on the Monongahela National Forest are not in nearby watersheds; they are over 30 and 100 miles straight line distance from the Ewing Mountain project area, respectively. Although the streams that support candy darters near those projects are in the New River Basin, they are not directly hydrologically connected.

Using over 1,800 samples collected across the Forest, Smith and Voshell (2013) compared pre-activity macroinvertebrate metrics with post-activity metrics for streams located below timber harvests and prescribed burns at various locations across the Forest and concluded that “management practices are successful at reducing effects on aquatic organisms” from these activities. The results showed no decline in macroinvertebrates following timber sales or prescribed burns.

The analysis performed for the *Ewing Mountain Fisheries and Aquatic Habitat Specialist Report*, the *Ewing Mountain Soil and Water Resources Report*, the Biological Evaluation, and the Biological Assessment, and the concurrence of the USFWS support a finding of no significant impact to the candy darter, its designated critical habitat, and general aquatic habitat associated with the project area.

## Climate Change

**The Forest Service should provide for public review a complete climate change analysis.**

#10-32 ... the Draft EA's climate change analysis does not account for the cumulative impacts from actions across the forest and the world.

#10-40 The Draft EA states the agency has prepared a "full detailed analysis" called the "Ewing Mountain Vegetation Project Project-scale Carbon Effects Report" but no such report is available on the project website. Why was this report not posted to the project website along with other Specialist reports?

#10-41 ... the Draft Geology Report for the project acknowledged a strategy developed by The Nature Conservancy for climate change adaptation, with geologic diversity as the foundation for biological diversity and resiliency to climate change.[...]If the agency has tools at its disposal like those referenced in the geology report, it must use them.

**Response:** Although the *Ewing Mountain Vegetation Project Project-scale Carbon Effects Report* (USDA Forest Service, 2021e) was prepared concurrent with the other specialist reports, we did not



receive notice that it was not available on the website until the end of the comment period. This was due to an oversight on our part and it was posted the next day. It is available through this link: [https://www.fs.usda.gov/nfs/11558/www/nepa/99079\\_FSPLT3\\_5638225.pdf](https://www.fs.usda.gov/nfs/11558/www/nepa/99079_FSPLT3_5638225.pdf)

Executive Order 14008, issued on January 27, 2021, established a National Climate Task Force to facilitate the organization and deployment of a Government-wide approach to combat the climate crisis. As new direction and policy is developed, we expect to benefit from additional tools for analyzing the relationship between our actions and the factors involved in climate change. Our best current analysis shows that this project affects a relatively small amount of forest land and carbon on the George Washington and Jefferson National Forests and might temporarily contribute an extremely small quantity of greenhouse gas (GHG) emissions relative to national and global emissions.

The Nature Conservancy report mentioned in the *Ewing Mountain Geology Report* (USDA Forest Service, 2021f) describes a region-wide strategic approach to planning, not a climate effects analysis tool. It is intended for a scale that is beyond the scope of the Ewing Mountain Vegetation Project. Where the project does align with the report's recommendations is that one of the intended outcomes is to increase the resiliency of the ecosystems within the project area. We expect that the project will increase the ability of the ecological systems to absorb disturbances while retaining the same basic structure and ways of functioning.

## Economics

### **The Forest Service should reinvest the money from the proposed timber sales on the Mount Rogers NRA.**

- #5-1 It was asked about estimated net revenues for the project and of the proceeds would be disbursed in percentage. Will all proceeds be invested locally? If not where and why not?
- #6-7 Income from Timber Sales should be returned to the Mount Rogers NRA for future projects.

**Response:** Some of the revenue from timber sales is kept on the local unit and the rest is deposited into the Federal government's general fund. The money kept locally is put towards reforestation activities within the project area and is known as K-V funds, named for the Knutson-Vandenberg Act of 1930. Depending on the activities planned, the amount of revenue reinvested on the Forest can be as much as 70 percent of the revenue generated. Additional information on reforestation is available here: <https://www.fs.fed.us/restoration/reforestation/overview.shtml>.

It's impossible for us to say where any other money will ultimately be spent. For a particular set of project activities, it's not always within our power to keep all the proceeds from this project within the local area. It depends on whether the activity is conducted under a timber sale contract, a stewardship agreement, Good Neighbor Authority (GNA) agreement, or a stewardship contract,. Further, it's not possible for us to calculate, or even reasonably estimate

what the total value of a resource will be in the future, when it is of an indefinite quantity and has a value which changes frequently and sometimes substantially.

## Geology

### **Geology - #1: The Forest Service should address the geologic hazard risk associated with the proposed type conversion treatment in the Pellbridge area.**

#10-1 The District proposes to clearcut 12 acres of white pine on a slope directly uphill of the abandoned detention dam in the Pellbridge pasture allotment.[...]The Forest Geologist for the GWJNF found that clearcutting in this already-vulnerable area could have catastrophic cumulative effects. The proposed road construction, log landing, skid trails, and logging operation itself would cause further ground disturbance. The slope of the proposed clearcut is steeper than the grazing pasture, so this additional disturbance would make storm runoff more rapid and voluminous. The increased stormwater flow would persist long-term given the type conversion from forest to Early Successional Habitat. Based on these impacts, the report concluded that the clearcut would "add incrementally to the existing hazards such as a potential breach in the berm on the crest of the dam, overtopping the dam, downcutting into the dam, and failure of the dam embankment and sediment behind the dam." A failure of the dam embankment specifically could cause flooding and a debris flow/mudflow that "would put lives and infrastructure at risk" in the Cripple Creek community.[...]The EA, however, fails to grapple with any of this. It does not mention the litany of risks identified by the Forest Service's own geologist. It does not mention the recommendation to drop any proposed ground disturbance and logging in this area. Nor does it address the need to first cooperate with other agencies, interested parties, and the public to develop a multi-stage plan of action. Without doing so, the District fails to satisfy its duties under NFMA to protect forest resources and its duties under NEPA.

**Response:** The risk associated with the Pellbridge detention dam was initially identified by the Forest Geologist through a review of remote sensing data that included satellite photos, Light Detection and Ranging (LIDAR) images, and historic topographic maps. This prompted a discussion with the Ewing Mountain Interdisciplinary (ID) Team as to the current level of risk and the cumulative effects of the proposed type-conversion treatment to this risk. In order to formulate an accurate assessment, the Pellbridge site was visited in the spring of 2021 by a team that included the Mt. Rogers Area Ranger and Forest staff from both the Engineering and Hydrology programs.

The team did not observe any signs of instability or indications of tension cracks or scarps that would indicate an immediate risk of mass failure. It was agreed that the Forest should consult the State of Virginia Department of Mines, Minerals, and Energy (DMME) to determine if a mitigation effort would be required in the future. Further discussion with the ID Team led to the conclusion that the proposed type conversion could increase the current risk incrementally, but not significantly.

The situation, as seen on the ground, has been stable for over forty years as the berm and spillway appear to have been effective since their estimated installation in the 1980s. The short-term increase in run-off due to the type-conversion treatment is not expected to be substantial enough to make a difference to the current function and is expected to decrease over the long term as the pastoral vegetation becomes established and infiltration rates increase. Access to the treatment stand was reconfigured to avoid the existing non-system route located in the pasture above the dam; access will be along the existing railroad grade and this road will be added to the Forest Service Road (FSR) system. This route appears to be stable with residual compaction and cut and fill slopes intact. The grade would work well for log trucks and would keep them out of the pasture, minimizing resource damage.

**Geology - #2: The Forest Service should implement protection measure to avoid impacts to caves and karst areas.**

- #8-9 To help reduce impacts to karst, DCR recommends that the entrance to Fry Hill Cave be located by the Forest Service. Once the entrance is located, DCR recommends avoidance of any work that would cause significant disturbance to the entrance, the soils in its immediate drainage area or footprint.
- #8-10 While performing work around the Deep Springs Cave Conservation Site, DCR recommends efforts to reduce erosion and sedimentation including avoidance of destabilization of the soils in this area.

**Response:** As noted in the *Ewing Mountain Geology Report* (USDA Forest Service, 2021f), karst-forming dolomite (dolostone) and limestone bedrock occur in the northern part of the Ewing Mountain project area. Karst is a type of geological terrain where underground dissolution of the bedrock creates sinkholes, sinking streams, caves, springs, underground streams, aquifers with large flows of groundwater, and other features. The Ewing Mountain project area encompasses the Raven Cliffs karst area, which has been designated as a Geologic Area in the Forest Plan and is managed under the *4C1 Geologic Areas* Management Prescription (Rx). No timber cutting or road building is proposed in this Rx.

Forest-wide and 4C1 Rx standards in the Forest Plan provide protection measures for caves and other karst features within the project area. Forest-wide Standard FW-63 calls for a minimum 200 foot buffer to be maintained around cave entrances, sinkholes, and cave collapse areas known to open into a cave's drainage system; no soil-disturbing activities or harvest of trees are allowed within this buffer. Other resource protections from the Forest Plan are listed in Appendix A of the *Ewing Mountain Vegetation Project Environmental Assessment* (USDA Forest Service, 2021g).

## Monitoring

### **Monitoring - #1: The Forest Service should commit to monitoring the project during and after implementation to ensure that the protection measures have been followed.**

- #2-1 We want to ask for someone from the forest service to be going out weekly to check on these loggers and what they are doing.
- #8-7 DCR supports the use of best management practices including maintaining riparian buffers to protect water quality as outlined in the 2021 USFS Ewing Mountain Vegetation Project EA Fisheries and Aquatic Habitat Specialist Report.
- #10-21 ... the Forest Service must commit to implementation monitoring throughout the watershed as required by the Conservation Plan. The Forest Service must also coordinate with the Virginia Department of Game and Inland Fisheries to monitor the candy darter.

**Response:** Implementation monitoring of project activities is conducted by Forest Service timber, soils, hydrology, and wildlife specialists. Weekly inspections of sale activities within a given sale area are a standard requirement of sale administration. A Forest Service representative, usually the sale administrator or harvest inspector, will conduct and document site visits on a weekly basis. This is to ensure that all protection measures and contract provisions are being followed. This includes [Virginia's Forestry Best Management Practices for Water Quality](#) (BMPs) (VDOF 2011, 2019) and all of the Resource Protection Measures (RPMs) in Appendix A of the Environmental Assessment (EA).

Adhering to BMPs is required on all Forest Service timber sales; this has been made explicit in RPM Soils and Hydrology -2. Streamside Management Zones (SMZs) are protected by a combination of buffers, including "no cut" and "no equipment" zones. The latter refers to an area in which vegetation management may occur, but any timber removal requires it be winched from outside the zone as heavy equipment is prohibited. Riparian buffers will be applied as per Forest Plan direction and outlined in the EA.

Forest personnel are currently working with Virginia Department of Wildlife Resources (VA DWR) personnel to survey candy darter habitat on the Forest in Cripple Creek. The Aquatics response to comments contains more information about the candy darter analysis.

### **Monitoring - #2: The Forest Service should describe the standards they will apply to determine whether the Killinger Creek Mine Restoration and Mitigation Project has been effective.**

- #10-22 More information about the Killinger Creek Mine Restoration and Mitigation Project is required[...]What standards will the agency apply to determine whether the remediation project "has been determined effective?"[...]the public should have an opportunity to comment on whether this critical condition precedent is satisfied before any units in the Cripple Creek watershed are advertised for sale.

**Response:** The Killinger Creek Mine Restoration and Mitigation Project work was completed in the summer of 2021. The project was designed by the State of Virginia Department of Mines, Minerals, and Energy (DMME) to stabilize the eroding channel and reduce the risk of channel erosion and downstream sedimentation of the pond and Killinger Creek. The project is being managed and inspected by DMME and they will give final approval that the restoration work adhered to the design specifications. In addition, Forest Service staff established baseline monitoring prior to the restoration work and will continue to monitor the restoration area and the downstream channel and pond to verify that erosion and sedimentation has been reduced effectively by the restoration.

## NEPA Process

**The Forest Service should consider an alternative that maximizes the creation of early successional habitat within the project area.**

- #9-1 The Virginia Department of Wildlife Resource's 2014-15 Ruffed Grouse Status Summary report showed that ruffed grouse in Virginia have declined at an average annual rate of about 3% over the past several decades. This is mostly the result of a lack of habitat structural diversity and biologically significant levels of young forests (forests age structures of 5 to 20 years).
- #9-2 Overall, RGS & AWS supports the project concept but encourages the Forest Service to consider the following recommendations to ensure that the Ewing Mountain project is meaningfully contributing towards Forest-wide Objectives from the Forest Plan: \* Increase early successional habitat creation to at least 4 percent of the 7E2 Management Prescription area. \* Increase early successional habitat creation to 10-16 percent of the 8E1 Management Prescription area.[...]The current proposed actions will result in an overrepresentation of late-successional to old growth conditions and an underrepresentation of early successional habitat conditions, as established as Objectives in the Forest Plan. To RGS & AWS this is unacceptable [...]If the Forest Service is not able to at least meet the minimum habitat Objectives from the Forest Plan on the Project-level, we are concerned that it is not going to happen Forest-wide.

**Response:** An alternative that maximizes the creation of early successional habitat was not considered in detail because about 60 percent of the project area is located within the *7E2 Dispersed Recreation Areas - Suitable* Management Prescription (Rx). The majority of stands considered for treatment in this Rx do not meet the minimum rotation age for regeneration (Standard 7E2-010). Overall, the amount of early successional habitat across the project area will increase from 146 acres (less than one percent) to 406 acres (about 2.5 percent).

In order to create early successional habitat, the overstory needs to be removed, and the main tools available to remove timber are prescribed fire and timber harvest. Mechanical treatments such as mowing and mulching are not feasible in creating new early successional habitat because the trees are too large for these methods. While prescribed fire is another tool that could be used to create early succession habitat, results can be highly variable as to which acres and/or how many acres are converted to early successional habitat. Due to the presence of

residences directly adjacent to Forest Service land, rare species in the areas susceptible to fire, and a special biological area adjacent to the proposed treatment stands, prescribed fire used at the intensity needed to convert mature timber to early successional habitat would not be considered feasible.

Timber harvest allows natural resource managers to pinpoint the exact acres to receive early successional treatments and identify the most suitable trees to be left behind. These trees are chosen primarily for their wildlife value and seed source value for the next generation of trees. Stands within the project area were assessed in relation to their respective Rx designation in the Forest Plan. If a stand had met the desired rotation age, then it could be proposed for a regeneration harvest (Forest-wide Standard FW-112). In some cases, the harvesting of trees prior to rotation age is allowed during the first cutting cycle in order to meet long-term desired condition of a particular Rx, provided they have reached an age where the average rate of annual tree growth stops increasing and begins to decline. This is known as the culmination of mean annual increment (CMAI). Rotation age and CMAI both constrain the number of stands that are suitable for regeneration with a particular project.

If a stand hasn't met the rotation age, then it is often appropriate to recommend a commercial thinning based on the existing basal area and stand conditions. While thinnings don't contribute to early successional habitat objectives, they can increase structural diversity of the understory and improve forest health by promoting growth/vigor of the residual trees.

## Non-native Invasive Species

**The Forest Service should address existing non-native invasive species (NNIS) within the project area and take steps to mitigate their impact and spread.**

- #8-4 The Southern Appalachian Mesic Calcareous Cliff at Raven Cliff was an exemplary occurrence in 2018 with little to no exotic invasive plants. However, the surrounding landscape continues to be compromised by the Forest Road at the cliff base, which is now extensively used by horses and is serving as a vector for invasive weeds.
- #10-33 We remain concerned though that the logging, roadbuilding, canopy opening, and ground disturbance associated with this project will result in the spread of NNIS.[...]The District needs to consider pre-treatment of existing infestations, which is generally recognized as an effective first step to mitigate spread.[...]There is no indication in the Draft EA, however, that the District is planning to pretreat existing infestations, or that a time period is set aside for pretreatment measures. [...]Will proposed NNIS treatments occur prior to initiation of any timber harvests?
- #10-34 Does the District envision loggers conducting a visual inspection for NNIS seeds?[...]the mitigation measures in the EA should require that all timber sale contracts for this project contain a requirement for loggers and agency staff to clean trucks and equipment before entering national forest lands.

#10-36 ... the Forest Service must more fully and adequately analyze NNIS to make a valid determination of the project's impact.

**Response:** The National Forest lands, like neighboring private lands, are increasing susceptible to non-native invasive species (NNIS). The Forest Service is committed to controlling NNIS, including reconnaissance, integrated treatments (chemical, mechanical, cultural and combinations) and monitoring to judge the effectiveness of treatments. While complete eradication of NNIS populations is not feasible in many cases, the agency is committed to not allowing these plants to curtail productivity or threaten important habitats on public lands or displace native species in large numbers.

On the ground conditions in the Ewing Mountain project area have been field verified and considered in the Environmental Analyses (EA). The *George Washington and Jefferson National Forests Forest-Wide Non-Native Invasive Plant Control Decision Notice* (NNIS DN) (USDA Forest Service, 2010) allows pre-treatment applications of existing NNIS within the project area, which are planned in addition to the NNIS treatments proposed.

Invasive species treatment centers on locating and identification of NNIS populations through general observations, pre ground-disturbance activity examinations, and post activity surveys. Areas with substantive existing invasive species populations, areas of disturbance with road access, or areas found to have new establishments of invasive species are identified and prioritized for treatment.

A standard timber sale contract provision B(T) 6.35 requires inspection of the purchaser's off-road equipment before entering National Forest lands. If their equipment is coming from an area of known infestation or they're unable to identify where their equipment is coming from, they're required to visually inspect said equipment for dirt, debris and vegetative matter that might contain NNIS plant seeds. Any such dirt and debris needs to be removed before they may move their equipment onto Forest Service land which does not already contain the non-native invasive species that were present on their previously identified work site (or before moving onto any Forest Service Land when the previous work site hasn't been identified).

Monitoring for NNIS continues past implementation as the District Silviculturist assesses stands for timber stand improvement needs, including NNIS treatment. Active management, including the systematic reconnaissance of treatment units and surrounding areas, will allow for identification and control measures on populations that would have likely gone undetected. Harvesting activities will likely allow the agency leverage funding opportunities for widespread control measures through vehicles such as the Knutson-Vandenburg Act (KV) funds and use of stewardship contracting. Robust monitoring will occur and will be scheduled in the Forest Service's Forest Activity Tracking System (FACTS) database to ensure follow-up.

## Outreach

**The Forest Service should inform local residents and other members of the public when proposed treatments may disrupt access within the community. This should include a public meeting and additional maps with treatment details.**

- #6-1 Collins Cove Road, State Route #643 is the only road allowing access and egress for residents of the Collins Cove Community[...]We strongly recommend that the Forest Service communicate any daily operations with the residents.
- #6-3 We would recommend a meeting with the residents and the Forest Service as this project moves forward, so that residents have a clear understanding of the type's of operations being conducted.[...]Forest Service shall provided updated information and notifications to property owners on any actions that will be taking place within the scope of this proposed project, such as timbering, clearing, chemical or burn treatments
- #6-4 More detailed map showing proposed projects - indicating type of operations and timeframes.
- #7-16 In addition to direct impact on trails the comments we have heard the most pertain to access and the issue of logging traffic on local roads[...]Road signage during and public announcements of active logging alerting to activity on roads used for hauling would be helpful as well as ample signage on system trails.

**Response:** After consulting with the Virginia Department of Transportation, it was determined that there were no restrictions for hauling timber on SR643. Given that it is the only access for community residents, coordination will be necessary to ensure safe operations. Although timing of the ground-based operations can't be predicted at this point, signage will be present during active operations. A standard timber sale contract provision B(T) 6.33 requires the Purchaser to provide adequate warning of potentially hazardous conditions associated with Purchaser's operations. Signage and flaggers may be used.

## Roads

**Roads - #1: The Forest Service should implement repairs, maintenance, and improvements to the system roads within the project area.**

- #6-2 ... with the usage of heavy equipment on the road system, what actions will the Forest Service take to operations causing damage to the road system?
- #10-9 Is the District completing all work described in the engineering report? To the extent these road improvements are assumptions supporting analysis in the EA and potential finding of no significant impact, the agency must ensure that they are included in the decision notice and implemented.



**Response:** All roads used for hauling timber from a sale will receive the necessary pre-haul, during haul, and post haul maintenance to prevent lasting damage and to mitigate erosion and sedimentation issues. Any damage to roads caused by the purchaser's operations will be repaired by the purchaser in accordance with the timber sale contract.

The *Ewing Mountain Engineering Field Report* (USDA Forest Service, 2021h) evaluated some roads that will not be needed for implementation of the proposed action. These include Bartons Gap Rd. (FSR 643), and Long Branch Road (FSR 794), which has been proposed for decommissioning. The other roads evaluated in the report are included in the proposed action and the recommendations were considered during the effects analysis.

**Roads - #2: The Forest Service should address the long-term effects of temporary roads within the project area.**

#10-3 The Draft EA does not adequately consider risks posed by temporary roads. The project proposes 5.1 miles of new temporary road construction. The District concluded in the Draft EA that the expected soil disturbance from temporary roads is "not significant" and would be mitigated through the RPMs described in Appendix A. It also found that water quality "may be marginally affected by sediment loading over the short-term," but finds that the RPMs will mitigate or avoid long-term sedimentation. The Geology Report conflicts with these conclusions.[...]even if the temporary roads are closed, revegetated, and restored to their original contour after the project's completion—which, to be clear, is not proposed here—they would "result in permanent, irreversible alterations of geologic conditions affecting slope stability, surface drainage, subsurface drainage, and storm water runoff." The report notes that "there is no way to avoid long term, permanent, and irreversible effects of temporary roads." Yet the Draft EA fails to discuss these permanent and irreversible long-term concerns, and the RMPs do not address them.[...]The Draft EA fails to acknowledge or respond to the long-term concerns about temporary roads discussed in the geology report.

#10-31 ... the Draft EA fails to scrutinize the likelihood that adding new temporary roads and skid trails for harvest access will increase unauthorized use in the project area.[...]it would be naïve to assume that unauthorized OHV/ATV and equestrian use will not occur on the temporary roads, even assuming the roads are closed and signage is implemented. The EA must discuss the inevitability that, even with mitigation measures, at least some unauthorized use will occur on any new temporary roads.

**Response:** Temporary roads are important to the analysis of potential effects to soil and water resources. Per the analysis, long-term soil disturbance (disturbance that will impact reforestation) from temporary roads, bladed skids, and landings is estimated to range from 0.1 to 0.4 percent of the total analysis watershed areas. Temporary roads and bladed skids were also incorporated in to the Geomorphic Roads Analysis and Inventory (GRAIP) Lite model to assess potential erosion and sedimentation from road surfaces and delivery to receiving waters. The aforementioned analyses focus on in-situ soil conditions and surface erosion from road surfaces and resulting sedimentation.

These analyses are different from the geology assessment because they do not assess potential changes to slope stability or subsurface drainage from temporary road construction. After use temporary roads are expected to be closed and revegetated with seeding and natural recruitment. This revegetation should reduce the risk of erosion and sedimentation during stormwater runoff.

## Soils

### **The Forest Service should better describe its sediment modeling and watershed analysis, and consider additional design criteria to support a finding of no significant impact (FONSI).**

- #10-4 The Soil & Water Report confirms the substantial impacts that temporary roads can have on sedimentation and water quality. For example, as originally proposed, temporary roads would have caused a 190% increase in sediment loading in Cove Branch and 20% in Cold Run. Although these specific temporary roads were rightly re-routed or dropped from the project, the projected impacts highlight the severity of impacts that temporary roads can cause.
- #10-5 Site-specific analysis (and mitigation) demand a spatial understanding of where erosion and sedimentation risks overlap, i.e., where steep slopes within units overlap soil types with moderate to severe erosion hazards based on soil types. While these two sets of data are analyzed individually in the Draft EA, they are not combined spatially to identify where potential high-risk sites exist. And while the Draft EA and accompanying reports contain a good deal of information regarding sedimentation, erosion, soil types, and associated erosion hazards, the analysis does not join up this information spatially so that site-specific impacts can be analyzed.
- #10-6 ... modeling shows a potential increase of >10% sediment delivery above background. This would apply to, for example, the Brush Creek and Little Brush Creek watershed, in which a 12% increase is estimated. This increase is significant because (1) Brush Creek is already rated "Functioning At Risk" due to "'fair' ratings related to water quality, aquatic habitat, road/trail density, and invasive species and 'poor' ratings for soils and fire conditions;" (2) the model seems not to include several existing sedimentation sources, as discussed below; and (3) the model is a "minimum estimate of erosion and sedimentation" from the project. As such, reducing sedimentation through project modification or mitigation is critical to a potential finding of no significant impact for this project.[...]The District must develop its proposed mitigation now—for Brush Creek and Little Creek watershed, as well as all other implicated watersheds—and disclose the mitigation to the public for review.
- #10-7 We are concerned that the sediment modeling leaves out several existing sources of sedimentation, further underestimating sedimentation in the project area. It seems that the model did not include impacts of ATV and equestrian trails—both authorized and unauthorized.[...]Nor does the model seem to include landings and non-bladed skid trails, further calling into question the "minimum estimate" the model purports to provide.

- #10-8 ... livestock grazing can degrade soil and water resources in multiple ways, including bank destabilization and sedimentation from trampling of stream banks or springs. To avoid negative impacts, there are allotment plan requirements. The Soil Report indicates, however, that some of these requirements are not being met,[...]Yet the EA contains no mitigation requiring such actions. The District needs to analyze and disclose all outstanding unmet allotment plan requirements that damage soil and water resources. [...]the EA should include an RPM that "No units will be sold within a watershed until all outstanding allotment plan requirements related to protecting soil and water quality within that watershed are completed."
- #10-25 The Draft EA also does not adequately analyze erosion and sedimentation risks specific to the watershed Austinville relies upon. The Draft EA recognizes that logging operations will cause increased risk of sediment entering streams during rain events, but does not consider the specific risk to the Austinville community's drinking water. The EA must address how significant ground disturbance from logging in these units will impact water quality in the watershed.

**Response:** Analysis of temporary roads is important to assessing potential effects to water quality.

Temporary roads (and bladed skids) were incorporated in to the Geomorphic Roads Analysis and Inventory (GRAIP) Lite model of road erosion and sedimentation, and model results produced changes to the proposed action that reduced the risk of erosion and sedimentation.

The Natural Resources Conservation Service (NRCS) Web Soil Survey tool (<https://websoilsurvey.nrcs.usda.gov/app/>) was used to assess risk of *off-road and off-trail erosion* in proposed treatment units, and these results are displayed in the soil and water report by soil map unit. This risk rating is computed based on slope, a soil erosion K factor, (texture, organic matter, structural aggregates, permeability, depth to permeable layer), and an index of rainfall erosivity—soil type and slope are combined spatially. The revised *Ewing Mountain Soil and Water Resources Report* (USDA Forest Service, 2021c) includes a map of off-road and off-trail soil erosion hazard from the NRCS Web Soil Survey tool.

In addition to national and State of Virginia Forestry Best Management Practices the *Ewing Mountain Soil and Water Resources Report* includes specific design criteria for protection of soil and water resources. Further, the soil and water report identifies two road-stream crossings on Forest Roads 667 and 690 planned for upgrade, and an approximately 0.8 mile segment of Forest Road 794 planned for decommissioning.

The GRAIP Lite model is designed to assess system road surface erosion and is not well-equipped to assess erosion from trails or the aerial extent of landings. As such the estimate of year-1 erosion and sedimentation is considered to be a minimum in the report. Overland or non-bladed skid trails are not expected to produce surface erosion when conditions and operations are being monitored and administered by a forest staff. It is anticipated that all-terrain vehicle (ATV) and equestrian trails will be addressed in a future project on the district.

## Trails

### **Trails - #1: The Forest Service should improve the trails within the project area as part of the proposed action.**

- #7-7 Since it is stated that skid trails will cross FST310 at least 3 times it would be good if some mechanized work could be done on the trail to maintain healthy tread in that area, which is narrow and somewhat sensitive.
- #7-14 We are looking forward to the prospect that when the project in that area is finished that the Moore Trail can be moved to the nearby haul road to get it out of the drainage in that area. It would be great, if possible, while machinery is in the area building the haul road, that temporary improvements can be made to the existing Moore trail from the Collins Cove stone gate to the Frog Pond as it is washed out by the many strong storms we have been having and difficult to navigate.

**Response:** The Forest Service decided to address the state of the Moore Trail (FST 4615) and several other project area system trails in a larger assessment of recreation opportunities within the eastern portion of the Mount Rogers National Recreation Area. This assessment will engage all interested parties to achieve long term sustainability of the area's authorized trail network.

Yellow Branch Trail (FST 310), along with all other system trails, will be considered a protected feature within the prospective contract. The logger must explicitly inform the Forest Service when they intend to cross the trail. If permission is given, the logger must do so in a way that does not damage the treadway. If they do incidentally damage the treadway, they will be required to repair whatever structural damage is done.

### **Trails - #2: The Forest Service should update the maps associated with the project to better reflect trail locations on the ground and the proposed location of temporary access routes.**

- #7-1 ... the maps do not clearly show the designated trail system[...]and in some cases designated system trails are not even shown [...]on some trails like the Moore Trail near Shiloh and Yellow Branch Trail it is showing old data that does not indicate current rerouted trail location accurately[...]The section of the Virginia Highlands Horse Trail between 602 and Shiloh and the Ewing Mountain Trail are not even on the map.
- #7-2 It also does not show exactly where haul roads will run concurrent with trails and the descriptions in text are vague
- #7-3 We would like to see updated maps that better show the trail system and its relationship to the project areas
- #7-6 C-4974, S29- It is unclear how this treatment will affect the Yellow Branch Trail (FST 310) because the trail data on your reference map is outdated and does not show the current trail route.

- #7-8 Ewing Mountain Trail- (FST 4614) - C-4971, S17- Once again the designated system trail is not shown on this map so it is hard to tell the effect of this treatment.
- #7-10 Moore Trail- (FST 4615)- C- 4970, S11, S2- The correct route for the Moore Trail through this section is not shown on the map so it is hard to evaluate.

**Response:** Thank you for the information concerning existing trail locations. The project area maps have been updated with the most recent Geographic Information System (GIS) data.

**Trails - #3:** The Forest Service should maintain buffers to protect the trails during treatment implementation and consider additional protection measures. If trails are damaged during implementation, they should be restored.

- #4-1 ... we respectfully request that no currently used horse trails be closed permanently.
- #6-5 Affect of proposed projects on designated trails within the project area; i.e. will projects close any of the designated trails while being done, affect on designated trails (damage) and maintaining trail aesthetics
- #6-6 Request that Forest Service maintain buffers to protect the trails where the project areas cross's designated trails.
- #7-4 ... this area is included in our 2021 Trail Rehab Project that has been funded by a NWSA Trail Stewardship Grant we will need to closely work with your team to identify any impact on this section of FST337 between SR602 and the intersection of VHHT/Mike's Gap near Shiloh.[...]We would like to avoid any disruption of the rehabilitated trail bed and/or develop an alternative
- #7-5 C-4987, S11 - This appears to be the area that is called Hugo's Meadow.[...]This meadow is very special to trail users and the public. We hope that if there is a loading platform planned for that area that it not be visible from the trail or meadow and that the haul road through the meadow be aligned in such a way as to be pleasing to the eye when the work is ongoing and after it is finished.
- #7-9 ... skid trails will crisscross the trail so we would like the trail clearly marked for the benefit of both loggers and trail users
- #7-11 In the area of the Moore Trail, about where the previous logging stops, there is a power line. The edges and woods surrounding the power line in that area are a favorite morel mushroom gathering area for local residents. If the treatment includes this area it would be nice if it could be identified and preserved.[...]Just beyond this there is a Poplar forest with a large stand of Black Cohosh. [...]we hope that a buffer along the trail can be preserved
- #7-12 C- 4970, S5 - The "Big Oak Tree", in the corner of the fence adjoining Brother Moore, is a much loved landmark. We would like an area around it preserved to protect the health of the tree and the aesthetics of the area

- #7-13 C-4983, S1, S2, C- 4984, S16, S17- It appears that these sections are in the area that is locally known by trail users as the "Frog Pond"[...]we would like it to be preserved as much as possible[...]We hope that the proposed landing will not impact this loved clearing/meeting spot.
- #10-37 The Forest Service must ensure that this project does not degrade the recreational experience in the Area[...]The Forest Service must take care to ensure the proposed management is not incompatible with recreational uses. In the short term, this means avoiding or mitigating logging traffic on and across trails. In the medium to long term, this means ensuring that trails in the area are restored or improved after harvest, including by ensuring that trails are returned to a state that is friendly to foot travel by hikers and horses (e.g. by resurfacing with small gravel rather than large gravel).
- #10-38 REC RPM-2 states that where "damage is possible, post-treatment standard and responsibilities for mitigation of damage will be identified." To be clear, the responsibility to repair any such damage falls upon the agency and the final EA should acknowledge as much.

**Response:** The Forest Service does not foresee closure of any system trail during project activities. As stated in Resource Protection Measure (RPM) Recreation -4 , when possible, access to system trails should be maintained during implementation of all treatments. Where this is not possible due to safety, coordination will occur with local Forest Service personnel to provide this information to the public, provide adequate signing and traffic management, and provide protection of these trails (Appendix A in the Environmental Assessment).

System trails within the project area are considered protected features. If the logger foresees impact to system trails such as having to cross them with equipment, they are required to receive explicit permission from the Forest Service to do so per RPM Recreation -2. The logger is also required to cross the trail in a manner that does not damage it. If they incidentally damage a system trail's treadway after receiving permission, they will be required to structurally repair that treadway. However, trails will not be repaired or improved beyond the condition existing prior to disturbance. Should skid trails need to cross system trails, they will be clearly marked for safety of both logger and Forest user (RPM Roads, Skid Roads, and Landings -3). We have and will continue to work closely with the Backcountry Horsemen of the Virginia Highlands to ensure that grant-funded work is unaffected by project activities as they implement the National Wilderness Stewardship Alliance (NWSA) Trail Stewardship Grant.

Based on user comments, we will take action to ensure that "Hugo's Meadow" and the "Big Oak Tree" will not be adversely affected by project activities. A GIS boundary will be overlaid on the meadow and its bordering vegetation. The Forest Service will not mark timber within that boundary or timber immediately adjacent to that boundary. However, we cannot ensure protection for the "Frog Pond" as it is within 25 yards of a proposed log landing and there is no viable alternative.

We will not be buffering system trails beyond the Visual Quality RPMs because of the impact to vegetation management objectives would be too great. The Forest Service considers varied

habitat – i.e. wildlife openings created by timber harvest – as beneficial to wildlife and thus having a positive impact on the recreation experience. We intend to carefully assess the needs of the system trail network within the eastern portion of the Mount Rogers National Recreation Area, including the effects of the Ewing Mountain Vegetation Project. This assessment could be incorporated into a community based public involvement process to develop a sustainable trail system on the NRA.

**Trails - #4: The Forest Service should consider the effects to non-system trails within the project area.**

#7-15 It is well known that there are a large number of non-system (user) trails in the project area. Some of these trails are heavily used, important routes that are being studied for possible inclusion in the Trail Plan[...]the fact that project treatments could adversely affect these trails makes it important for them to be included in this discussion.

**Response:** The Ewing Mountain Vegetation Project is focused on enhancing wildlife habitat and ecosystem function and does not propose to close any designated Forest Service trails. However, where unauthorized routes overlap with treatment areas of temporary access roads, they will be closed out and the disturbance will be mitigated to minimize the impacts from erosion and sedimentation. The Forest Service encourages the use of trails designated as part of our official trail system and discourages the use of unauthorized routes as they can cause damage to other resources such as cultural sites, soils, and aquatic habitat.

## Vegetation

**Vegetation - #1: The Forest Service should make sure that all proposed treatments conform to the standards set in the Forest Plan.**

#10-2 ... the District cannot proceed with the proposed plan to clearcut white pine in unit 4970-87 (Pellbridge pasture allotment) because the Forest Plan standards for management prescription 7G- Pastoral Landscapes provide that "[t]hese non-forest areas are unsuitable for timber management" and only "occasional tree removal or herbicide use [that] may be necessary to manage forest encroachment, provide scenic view, improve visitor safety, or encourage the presence of certain watchable wildlife species" is allowed. This proposal is not "occasional tree removal"; rather, it is a 12-acre clearcut to achieve total forest type conversion, which the Plan does not allow.

#10-24 ... proposals to use the clearcut with reserves method (a two-aged regeneration method) in units 4979-4 (65 acres) and 4979-8 (54 acres) appear to violate Forestwide Standard 114, which limits the maximum opening size created by a two-aged regeneration cut to 40 acres.

#10-26 ... the District must determine in the EA whether Units 4971-1, 4971-2, and 4978-2 have extended riparian buffers present.[...]If extended riparian buffers are identified in these stands,

the District should apply all 9A1 standards as discussed above. The proposed clearcuts in 4971-1 and 4978-2 would contravene 9A1 standards in any riparian buffer areas.

**Response:** The Forest Plan states that the emphasis of the *7G Pastoral Landscapes Management Prescription (Rx)* is providing, through maintenance or restoration, high quality, generally open landscapes with a pastoral landscape character. Removal of the white pine will increase the open landscape while improving habitat for early successional species and watchable wildlife.

Within the *8E1 Ruffed Grouse/Woodcock Habitat Emphasis Management (Rx)* (which includes units 4979-4 and 4979-8), the optimum size of clearcuts should range from five to twenty acres. Although the total unit size is listed for units 4979-4 and 4979-8, the treatments proposed within these units (clearcut openings of 20 acres) will be separated from each other by 330 feet (Forest-wide Standard FW-115) which will be under the maximum size for even-aged and two-aged regeneration cutting in Virginia (Forest-wide Standard FW- 114).

**Vegetation - #2: The Forest Service should consider old growth, rare communities, and State identified conservation areas in its effects analysis.**

- #8-1 ... the Raven Cliff, Jones Knob and Deep Springs Conservation Sites are documented within the project area.[...]The Raven Cliff Conservation Site has been given a biodiversity significance ranking of B2, which represents a site of very high biodiversity. The natural heritage resources of concern associated with this site are: Mountain/Piedmont Cliff G3/S3/NL/NL Southern Appalachian Mesic Calcareous Cliff G2/S1S2/NL/NL[...]Based on review of the proposed actions in Ewing Mountain Vegetation Project Environmental Assessment (EA), DCR does not anticipate impacts to this cliff. The Mountain / Piedmont Acidic Cliff within the Raven Cliff Special Management Area (the Raven Cliff) is also within the project boundary, but does not appeared to be involved in any of the proposed activities.
- #8-2 The Jones Knob Conservation Site has been given a biodiversity significance ranking of B3, which represents a site of high biodiversity. The natural heritage resource of concern at this site is: Southern Appalachian Pine - Oak / Heath Woodland G3/S3?/NL/NL[...]The Southern Appalachian Pine - Oak / Heath Woodland present at Jones Knob is showing good pine recruitment and has benefited from fire in the landscape (natural or prescribed).
- #8-3 According to a DCR ecologist, the significant natural communities that fall within the proposed project boundary provided would not be adversely affected by canopy thinning or prescribed fire.
- #8-5 DCR recommends not harvesting areas with documented occurrences of Carolina hemlock.
- #8-6 According to a DCR zoologist, based on recent surveys no rare animals were documented in the project area.
- #8-8 This project also intersects the edges of the Deep Springs Cave Conservation Site, which has been given a biodiversity significance ranking of B4, which represents a site of moderate



biodiversity[...]. The natural heritage resource at this site is: *Caecidotea incurva* Incurved Cave Isopod G2G4/S2/NL/NL

#10-42 The Forest Service must identify and disclose old growth during project planning.

**Response:** The State identified conservation areas within the Ewing Mountain Vegetation Project (Raven Cliff, Jones Knob and Deep Springs Conservation Sites) will not be impacted by the proposed actions. During the effects analysis, it was discovered that access to treatment units in Compartment 4983 (Map 12) was planned through the *4C1 Geologic Areas* Management Prescription (Rx) around the Raven Cliff area. The access was rerouted to avoid this Management Rx and no treatments have been proposed within this prescription.

As noted in the *Ewing Mountain Forest Communities Report* (USDA Forest Service, 2021i), there are pockets of three management prescriptions involving old growth (Rx 6A, 6B, and 6C) within the project area which total 627 acres, about four percent of the project area. No treatments have been proposed in these Management Rx's. In addition, a number of old growth communities within the project area have been identified and mapped during on the ground surveys. We are committed to continuing this effort up through the marking and sale layout stage of the project. Any old growth communities identified will be excluded from the potential sale units. We welcome any additional information concerning existing old growth within the project area.

**Vegetation - #3:** The Forest Service should clarify its analysis for cumulative effects to vegetation from the proposed action.

#10-28 ... the Forest Communities Report asserts that "[c]umulative effects for the forest vegetation were analyzed at the stand level." What does this mean?

#10-29 ... it appears the agency has not taken a hard look at the cumulative impact of the project in conjunction with its own past actions. The Forest Communities Report identifies the 2015 Fry Hill timber sale, but states in conclusory fashion that this sale and other prior treatments "are sufficiently isolated temporally and geographically that they will not have a cumulative impact with the expected effects of the Ewing project."

#10-30 ... it appears the Forest Service has not assessed whether this project will have a cumulative impact in conjunction with private action happening nearby.

**Response:** Management prescriptions within the forest plan set guidelines for managing stands within a certain prescription area; the expected effects analysis is done at the stand level to be consistent with these management prescriptions. A stand is a contiguous group of trees sufficiently uniform in age-class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit.

The Forest Plan was followed to meet the early successional habitat objectives of management prescriptions. The Forest Plan direction applies only to National Forest System (NFS) lands.

Thus, the Ewing Mountain Vegetation Project was developed to move toward the desired condition specific to NFS lands only and is consistent with the Forest Plan.

Activities, including timber harvesting, on lands adjacent to the project area were considered in the analyses and it was determined that there are no cumulative effects to vegetation from non-Forest Service actions. No effects to vegetation from non-NFS lands were identified that overlapped with the expected effects from the Ewing Mountain proposed action. The interdisciplinary team evaluated direct, indirect, and cumulative effects from events or activities on all lands within the analysis area(s). Cumulative effects are documented in the specialist reports and Environmental Assessment.

## Visual Quality

### **The Forest Service should consider additional protection measures for visual quality.**

#10-39 The Forest Service should also strive to maintain the aesthetic value of popular trails[...]several recommendations from the draft Scenery Analysis Report are not included in the Project Resource Protection Measures for Visual Quality (VQ)[...]the following measures should be added to Appendix A: \* To protect the WSW view from Brush Creek Road (SR 602) near Coon Branch, bare mineral soil areas such as log landings and bladed skid trails will be located out of view where practical (FW-193). If impractical, other measures will be taken to reduce the visibility such as maintaining a low visual barrier of slash less than 2' high along areas of bare earth visible from the road, and revegetating landings and skid trails at the completion of the project. Cut and fill soil slopes for temporary roads must be revegetated per FW-197. \* In units C4971 S14 and C4971 S8 and the High SIO portion of C4971 S17, a buffer of trees along Ewing Mountain Trail will be retained such that management actions are not evident to trail users. Additionally, compliance with FW-190 and FW-191 will reduce visual impacts of the temporary road during project implementation, and compliance with FW-197 will reduce post-project visibility. Additional measures, including covering the road slash, will be taken to reduce the post-project visibility. \* In unit C4979 S22, the landing will be relocated out of sight of the horse trail (FW-193). The skid trail may cross the trail at a right angle but then turn to go out of sight, and must be restored and revegetated where visible from the trail upon completion of the project. \* In addition to the mitigation steps already proposed in VQ measure 6 (Draft EA at 36), treatment in units (C4972 S36, Map 5); (C4973 S15, Map 6); (C4973 S25, Map 6) (C4974 S5, Map 7); and (C4977 S9, Map 9) should leave higher basal areas. \* The VQ section should also make clear that sufficient vegetative screening will be retained along private property boundaries in addition to trail and road corridors.

**Response:** Thank for the suggested additional protection measures. Upon review, it was determined that many of these suggestions are already covered in the current Resource Protection Measures (RPMs). Forest-wide Standards FW-190, FW-191, and FW-193 are mentioned in RPM Visual Quality -1. However, based on these comments, FW-197 was added to the list.

The recommendation for the view from Brush Creek Road (SR602) is covered by Forest-wide Standard FW-193, and the suggestion that treatment maintain a low visual barrier of slash less than two feet high along areas of bare earth visible from the road will be implemented if needed. RPM Roads, Skid Roads, and Landings -14 directs temporary roads, skid roads, and landings to be reseeded once all proposed activities requiring access are completed.

RPM Visual Quality -2 calls for the retention of a 70-100 foot untreated buffer in units (C4971 S8), (C4971 S14), and (C4971 S17) along the Ewing Mountain Trail (FST 4614). Additional measures, including covering the temporary access road with slash per RPM Soils and Hydrology -4, will be taken as needed.

It was determined that it is not practical to relocate the landing associated with unit (C4979 S22). Any skid roads or skid trails that cross the Virginia Highlands Horse Trail (FST 337) will do so at a right angle and will turn to go out of sight. Per RPM Visual Quality -5, skid roads will recontoured to natural-appearing terrain within 50 feet either side of the Virginia Highlands Horse Trail where they cross. Per RPM Visual Quality -4 and RPM Roads, Skid Roads, and Landings -14, skid roads and landings will be revegetated following treatment.

A higher residual basal area was considered for the thinning units described in RPM Visual Quality -6, but it was not compatible with the objective to open up the canopy and encourage advanced oak regeneration within the understory. The treatments will still minimize visual disruption by avoiding straight lines, geometric shapes, and abrupt edges when the vegetation is cut.

A new protection measure, RPM Visual Quality -7, was added to retain vegetative screening along the private property boundary in units (C4970 S5, Map 2); (C4971 S1, Map 4), and (C4973 S15, Map 6).

## Water Quality

**The Forest Service should apply all standards from the 9A1 Management Prescription to the proposed treatment units 4978-13, 4978-17, 4978-19, 4979-4, and 4979-8.**

#10-23 ... in order to adequately protect drinking water for the Austinville community, all standards of 9A1, not just Standard 9A1-001 should apply in units 4978-13, 4978-17, 4978-19, 4979-4, and 4979-8.

**Response:** Five of the units in the Ewing Mountain Vegetation Project (units C4978 S13, C4978 S17, C4978 S19, C4979 S4, and C4979 S8) are on the edge of the Surface Water Zone 1 (within a five mile upstream radius of a water intake) for the unincorporated community of Austinville, Virginia. Other stands within these compartments are not within the radius. All of these stands are managed under the *8E1 - Ruffed Grouse/Woodcock Habitat Emphasis* Management Prescription (Rx) and the proposed treatments were designed to reflect this. As further protection for the five units in Surface Water Zone 1, the project-level Resource Protection

Measure Soil -6 directs that channeled ephemeral stream zones are managed as part of the riparian corridor and that no timber harvest will occur in the extended stream management zone buffers of these units. It was determined that this would be sufficient to avoid significant effects to water quality and is compatible with Forest Plan direction for Management Rx 8E1.

## Wildlife

**The Forest Service should provide for public review the Biological Evaluation / Biological Assessment (BE/BA) analysis to support its conclusions summarized in the draft Environmental Assessment.**

#10-10 We understand from the draft EA that the Forest Service has prepared a biological evaluation/biological assessment (BE/BA) for the project, which will be made available with the final EA.[...]it would have been useful for the Forest Service to make the BE/BA available on the project website during the comment period, even if in draft form. The ability to review and comment on the BE/BA is necessary to provide an opportunity for well- informed, meaningful public comment on the project.

**Response:** A Biological Assessment (BA) and a Biological Evaluation (BE) of the project proposed action were prepared for consultation with U.S. Fish and Wildlife Service (USFWS). These documents were in draft form and not available for release until consultation had been completed, however, a summary of the findings were included in the draft Environmental Analysis (EA) to provide an opportunity for public review and comment. The final documents were posted electronically on the project website (<https://www.fs.usda.gov/project/?project=44665>) at the same time as the final EA and draft Decision Notice

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